

CUSTOMER NO.: 24498  
Serial No. 10/576,665  
Office Action dated: 3/31/10  
Response dated: 8/19/10

PATENT  
PF030161

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Remarks/Arguments

In the Office Action, the Examiner stated that claims 1-7 are pending in the application and that claims 1-7 stand rejected. The Applicants have herein cancelled claims 3, 5 and 7 and have amended claims 1, 2, 4 and 6 to correct for informalities pointed out by the Examiner and to more clearly define the invention of the Applicant. The Applicant has also added claim 8.

In view of the amendments presented above and the following discussion, the Applicants respectfully submit that none of these claims 1-7 now pending in the application are anticipated under the provisions of 35 U.S.C. § 102 or rendered obvious under the provisions of 35 U.S.C. § 103. The Applicant further believes that all of the claims now pending in the application now comply with the provisions of 35 U.S.C. § 101 and the provisions of 35 U.S.C. § 112. Thus, the Applicants believe that all of these claims are now in allowable form.

Objections

The Examiner objected to the Applicants' information disclosure submitted December 31, 2007 as failing to comply with 37 CFR 1.98(a)(1).

The Applicants respectfully submit that the information disclosure statement (IDS) identified by the Examiner was erroneously transferred to the Examiner and applied to the present case through an oversight of the U.S. Patent Office. More specifically, in December of 2007, the Applicants submitted an IDS in a commonly-owned patent application having an Attorney Docket Number of PF040161 (the serial no. not known at the time of filing the IDS). Inadvertently, the U.S. Patent Office applied that IDS to the present case having an Attorney Docket Number of PF030161 (Serial no. 10/576,665).

The Applicants respectfully request that the Examiner forward that IDS to the correct patent application to have that IDS applied to the correct patent application and respectfully requests that the objection to the IDS in the present patent application be withdrawn.

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**PATENT****PF030161****Rejections****A. 35 U.S.C. § 112**

The Examiner rejected the Applicants' claim 6 under 35 U.S.C. § 112, first paragraph indicating that the Specification does not provide enablement for a single means claim for detecting, calculating and detecting as claimed.

In response, the Applicants have herein amended claim 6 to include a separate means for performing each element of the Applicants' claim 6. Having done so, the Applicants submit that the basis for the Examiner's rejection of claim 6 has been removed and respectfully requests that the rejection of claim 6 be withdrawn.

**B. 35 U.S.C. § 112**

The Examiner rejected the Applicants' claims 1-7 under 35 U.S.C. § 112, second paragraph as being indefinite because claims 1 and 6 recite the limitation "the lines" in lines 3 and that there is insufficient antecedent basis for this limitation.

In response, the Applicants have herein amended claims 1 and 6 to recite "lines" and removed the word "the". Having done so, the Applicants submit that the basis for the Examiner's rejection of claims 1 and 6 has been removed and respectfully requests that the rejection of claims 1 and 6 be withdrawn.

**C. 35 U.S.C. § 101**

The Examiner rejected the Applicants' claim 7 under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

The Applicant has herein cancelled claim 7 and added new claim 8 which is directed to and claims a "non-transitory computer readable medium" which the Applicant submits complies with the provisions of 35 U.S.C. § 101. Having done so, the Applicants submit that the basis for the Examiner's rejection of claim 7 has been removed and respectfully requests that the rejection of claim 7 and, as such, claim 8 be withdrawn.

**D. 35 U.S.C. § 102**

The Examiner rejected the Applicants' claims 1 and 3-7 under 35 U.S.C. § 102(e) as being anticipated by Baron (U.S. Patent Application No. 2003/0016883 A1). The rejection is respectfully traversed.

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The Applicants have herein amended claim 1. Amended claim 1 recites a method for detecting the orientation of an image, comprising the steps of:

- detecting lines in the image,
- calculating, for each line detected, attributes characterizing each line,
- classifying each line into angular intervals according to its orientation,  
wherein it comprises the step of
  - providing to a learning-based decision system, said attributes and the number or lines in each angular interval,
  - detecting the orientation of the image by comparing said attributes with the learning-based decision system models.

Support for the limitation of "calculating, for each line detected, attributes characterizing each line" can be found specifically on page 5 line 10 of the Applicants' specification. In addition support for the limitation of "classifying each line into angular intervals according to its orientation," can be found specifically on page 5 line 22 of the Applicants' specification and for "providing to a learning-based decision system, said attributes and the number or lines in each angular interval" can be found on page 6, line 17 of the Applicants' specification. Even further, support for "detecting the orientation of the image by comparing said attributes with the learning-based decision system models", can be found on page 6 line 36 to page 7 line 2 of the Applicants' specification.

The Applicant submits that Baron does not disclose any learning-based decision model as taught and claimed by the Applicants' amended claims. The Examining division refers to Baron when detecting by learning the orientation of the image. However, Baron does not disclose at all a learning-based decision system as taught and claimed by the Applicant. In fact, Baron only discloses in paragraph 12 that "the list of longer lines is sorted and then a determination is made by software concerning whether a majority of captured straight lines are aligned within five degrees horizontally or vertically". The Applicant submits that such teachings do not refer to or teach a learning based decision model. In fact, Baron only discloses that a direct decision is made by software by taking each line and determining directly its orientation. No mention is made of a learning based decision model. Baron discloses that the determination of the orientation is made by detecting the orientation of each line without

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submitting this to a learning-based decision model. As such, the Applicants submit that Baron fails to teach each and every limitation of the Applicants' amended claims as required for anticipation and that, as such, the Applicants' claims, and specifically, amended claim 1 is new in view of Baron.

Therefore, the Applicants submit that for at least the reasons recited above, the Applicants' claim 1 is not anticipated by the teachings of Baron. Therefore, the Applicant submits that the Applicants' claim 1 fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Likewise, the Applicants' claim 6 is an independent claim that recites similar relevant technical features as the Applicants' independent claim 1. The Applicants respectfully submit that for at least the same reasons as recited above with reference to the Applicants' amended claim 1, independent claim 6 is also not anticipated by the teachings of Baron, and, as such, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Furthermore, dependent claim 4 depends directly from the Applicants' independent claim 1 and recites additional features therefor. As such and for at least the reasons recited above, the Applicants submit that dependent claim 4 is also not anticipated by the teachings of Baron. Therefore the Applicant submits that dependent claim 4 also fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

#### E. 35 U.S.C. § 103

The Examiner rejected the Applicants' claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Baron in view of Li et al. (U.S. Patent No. 7,088,474). The rejection is respectfully traversed.

The Examiner applied Baron to claim 2 as applied above for the rejection of the Applicants' claim 1, from which claim 2 depends. As recited above and for at least the reasons recited above, the Applicants submit that claim 1 is not anticipated or rendered obvious by the teachings of Baron. As such, the Applicant submits that at least because claim 1 is not anticipated or rendered obvious by the teachings of Baron, the

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Applicants' claim 2, which depends from the Applicants' claim 1, is also not anticipated or rendered obvious by the teachings of Baron.

The Applicant further submits that the teachings of Li absolutely fail to bridge the substantial gap between the teachings of Baron and the Applicants' invention. That is, Li teaches a method and system for enhancing images using edge orientation. In Li, a method utilizes the direction of a detected edge within an image block of an input image to selectively smooth or sharpen a pixel of the input image that corresponds to that image block. The direction of a detected edge within the image block is determined by computing the horizontal gradient and the vertical gradient, and then using the ratio of the computed gradients.

The Applicant submits however, that there is absolutely no teaching or suggestion in Li for any learning-based decision model as taught in the Applicants' Specification and claimed by at least the Applicants' claim 1. In fact, the Examiner only cites Li for teaching thresholding the gradient of luminance of the points belonging to each contour detected.

Therefore, the Applicant submits that for at least the reasons recited above, the Applicants' independent, amended claims 1 and 6 are not rendered obvious by the teachings of Hsu and Sako, alone or in any allowable combination. As such, the Applicant further submits that claims 4 and 8, which depend from the Applicants' claims 1 and 6 are also not rendered obvious by the teachings of Hsu and Sako, alone or in any allowable combination. Therefore, the Applicant submits that the Applicants' claims 4 and 8 fully satisfy the requirements of 35 U.S.C. § 103 and are patentable thereunder.

The Applicants reserve the right to establish the patentability of each of the claims individually in subsequent prosecution.

### Conclusion

Thus the Applicants submit that none of the claims, presently in the application, are anticipated under the provisions of 35 U.S.C. § 102 or rendered obvious under the provisions of 35 U.S.C. § 103. The Applicant further believes that all of the claims now pending in the application now comply with the provisions of 35 U.S.C. § 101 and the provisions of 35 U.S.C. § 112. Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

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If however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion, it is respectfully requested that the Examiner telephone the undersigned.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account No. 07-0832.

Respectfully submitted,  
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